



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,460	06/25/2003	Jack Ing Jeng	03-6067	3287
36596	7590	06/06/2005	EXAMINER	
LAW OFFICES OF J.F. LEE 17800 CASTLETON STREET SUITE 383 CITY OF INDUSTRY, CA 91748			BEHNCKE, CHRISTINE M	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/603,460

Applicant(s)

JENG, JACK ING

Examiner

Christine M. Behncke

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☒ Claim(s) 20,22,23,25 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/12/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This office action is in response to the Remarks filed 07 March 2005, in which claims 1-26 were presented for examination. Prosecution has been reopened and the Ex Parte Quayle withdrawn.

### *Drawings*

2. The drawings were received on 07 March 2005. These drawings are Figures 1-3 and 22.

3. Applicant indicated in Remarks filed 07 March 2005 that a replacement sheet for Figure 8, with previously objected drawing elements 612 and 620 removed, was attached therein. However, no replacement sheet for Figure 8 has been entered into the application file.

4. Regarding Figures 11 and 12, Applicant states "element 697 was already taken out in the replacement drawings submitted by Applicant's 10/12/2004 Response". The replacement sheets submitted 10/12/2004 for Figures 11 and 12 contain element 697. Corrections of these drawings are required.

5. Regarding Figure 21, the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: element 777, page 31: line 21.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

Art Unit: 3661

prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

6. Claim 20 recites the limitations "wide-angle view lenses" in line 2 and "the LED flash" in line 3. There is insufficient antecedent basis for this limitation in the dependent claim.
7. Claim 22 recites the limitations "wide-angle view of the lenses" in lines 1-2. There is insufficient antecedent basis for this limitation in the dependent claim.
8. Claim 25 is objected to because of the following informalities: improper form: line 3 "activation. This microcontroller". Appropriate correction is required.
9. Claims 23 and 26 are objected to because of the following informalities: improper form: last line should end with a period. Appropriate correction is required.
10. Claim 23 is objected to because of the following informalities: "operation method" is unclear in previously indicated apparatus claim.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-4, 7, 8, 15-18, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutzet et al., US Patent Application Publication No. 2003/0117728, in view of Chan, US Patent No. 5,899,956, and in further view of the admitted Background Of The Invention of the current application.

12. **(Claims 1, 4, 15-18 and 26)** Hutzet et al. discloses an electronic circuit system device embedded into a rearview/side mirror of a vehicle (Abstract) comprising: a GPS receiver circuit module with an antenna ([0088] lines 1-4); a plurality of optical lenses and CCD/CMOS sensors ([0106]); a CPU based central control module circuit ([0120] lines 92-95); a memory storage ([0115]); a battery ([0111]); real-time clock with battery (inherent in a GPS system); both USB Host and USB Device outlets ([0218]); and internet communication outlet ([0094]). Hutzet et al. does not disclose a vibration and motion sensor/gauge. However, Chan teaches the use of a vibration/motion sensor/gauge (impact/shock sensor, element 105). It would have been obvious to combine the invention of Hutzet et al. with the teachings of Chan because the vibration/motion sensor is connected to the microprocessor and is used for triggering the automatic storage of detected visual information that comes within the vicinity of the vehicle in a memory device (Column 7, lines 27-34). Further Chan teaches the stored

Art Unit: 3661

images can be retrieved for aftermath analysis in cases of a car crash or accident (Column 8, lines 50-58).

Hutzel et al. does not explicitly disclose wherein the GPS antenna is a planar antenna. However, the use of a planar antenna is well known in the art at the time of the invention and it would have been obvious to adapt the invention of Hutzel et al. to include a planar antenna. As stated in Applicant's own Background of the Invention, it would have been obvious to include a planar antenna in the device of Hutzel et al. because planar antennas are easily mass-produced, are useful because of their flat appearance and are already widely used in Personal, Wireless and mobile communication units.

Hutzel et al. does not explicitly disclose that the CPU is a RISC CPU with a plurality of UART serial control ports, a plurality of USB control/host ports, an Ethernet port, a DRAM and Flash memory controllers. However, RISC architecture based CPU is one of the most commonly known and used architecture in modern computers and it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize this well-known CPU. Within most CPUs available, there is a plurality of UART serial control ports located on control chips to manage the reception/output of streams of data. Further the use of DRAM in a CPU is well known in the art at the time of the invention. As stated in Applicant's Background of the Invention, USB control/host ports are well known in the art for conveniently connecting a plurality of devices with a controller due to its low cost and wide spread use. Hutzel et al. discloses the use of a battery, it would have been obvious to one of ordinary skill in the art to specify that the

battery be a lithium-ion battery as they are widely used, reliable, rechargeable, and increasingly inexpensive. Hutzet et al. discloses an Internet communication outlet but does not specify Ethernet. However, as stated in Applicant's Background of the Invention, Ethernet networks are well known in the communications field and are by many considered to be the most popular system today.

Hutzet et al. does not disclose a Smart Card Access host electronics module. However, as stated in Applicant's Background of the Invention, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the invention of Hutzet et al. with a Smart card access host because as the Applicant discloses, Smart Cards are secure and are becoming widely used.

Hutzet et al. disclose an image capturing system including a CCD/CMOS sensor, but does not specify that the images are compressed with single JPEG/MPEG compression circuit module. However, as stated in Applicant's Background of the Invention, it is well known in the art at the time of the invention to compress the images using a multiplexer to save storage space and transmission time.

13. **(Claim 2)** Hutzet et al. discloses wherein the device is a stand-alone unit and is mounted at a proper position to a windshield glass of a vehicle (figure 46).

14. **(Claim 3)** Hutzet et al. discloses wherein the device is at a proper position of the windshield glass and is mounted at the highest position for better wireless communication and with the GPS antenna facing the sky and better visual recording positions of a vehicle ([0086] and [0096]).

15. **(Claims 7 and 8)** Hutzet et al. discloses the use of an antenna but does not specify wherein the antenna is planar. But as discussed previously, it would have been obvious to use a planar antenna with the device because planar antennas are easily mass-produced, are useful because of their flat appearance and are already widely used in Personal, Wireless and mobile communication units. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of a print circuit trace antenna, ceramic chip antenna, or PIFA antenna because each are a well known type of planar antenna.

16. **(Claim 23)** Hutzet et al. discloses the operational method of functions that includes: a vehicle accident emergency alarm activation ([0115]); an anti-theft alarm activation ([0115]); a voice/motion recording scheme coordinated with the motion sensor/gauge (microphone recording of sounds [0115]); a digital video recording scheme coordinated with the motion sensor/gauge ([0115]); a USB wireless communication adaptor when connected to a USB host such as a laptop PC for wireless communication ([0026] [0122] and [0124]); and an earthquake, tornado, and enemy attack warning scheme ([0094] and [0115]). Hutzet et al. does not explicitly disclose wherein a laptop is used for mapping, displaying, voice communication, and digital camera adaptor. However, Chan teaches wherein the rearview mirror device works as a USB GPS receive adaptor when connected to a USB host such as a laptop PC for mapping and displaying (Column 8, lines 17-37), wherein the device also is a USB voice communication adaptor (Column 4, lines 10-30) and a digital adaptor when connected to a laptop PC (Column 4, lines 10-53). It would have been obvious to one of ordinary



skill in that art at the time of the invention to combine the invention of Hutzel et al. with the teachings of Chan because the laptop computer is well known and developed to quickly map and display directional information, in addition the voice adaptation increases safety by not requiring the driver to look down/over from the road. Chan teaches wherein the device can download to a mobile driver from a persistent, non-volatile, memory to retrieve video/voice/motion recordings (Column 7, lines 27-34 and Column 8, lines 50-58). Further, Chan teaches the transferring of data from a temporary to persistent memory in cases such as accident or crash (Column 8, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine this feature of Chan with the invention of Hutzel et al. because as Chan teaches this retrieved data can be used to investigate the cause of accidents or thefts.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, 9, 10, 13 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutzel et al. in view of Chan as applied to claim 1 above, and further in view of Turnbull et al., US Patent No. 6,750,823.

18. (**Claims 5 and 6**) Hutzel et al. does not disclose the use of specific wireless communication other than radio frequency wireless communication ([0105]). However,

Art Unit: 3661

Turnbull teaches the use of a cellular antenna embedded into a vehicle rearview or side mirror (figures 8A-8C). It would have been obvious to one of ordinary skill in the art at the time of the invention that CDMA (Code-Division Multiple Access) is a digital cellular technology and could be used with a general cellular antenna.

19. **(Claims 9 and 10)** Hutzet et al. discloses the use of an antenna connected to the GPS receiver. Hutzet et al. does not explicitly disclose wherein the antenna is a planar antenna. However, Turnbull et al. teaches using a microwave antenna, preferably a planar patch antenna to receive GPS signals (Column 6, lines 56-65) wherein the antenna is located in a mounting structure glued to the windshield glass of the vehicle (Column 5, lines 1-37). Further, Turnbull et al. teaches wherein the antenna may be located separately from the receiver circuit therefore a coaxial cable connection would be required (Column 7, lines 44-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Hutzet et al. in view of Chan with the teachings of Turnbull et al. because the antenna mounting taught by Turnbull et al. allows for a secure mounting on the top of the windshield, better reception of satellite signals and retain a pleasing aesthetic (Column 5, lines 13-57). Further, it is well known in the art that a pig-tail coaxial cable is one type of coaxial cable and it would have been obvious to one of ordinary skill to use a pig-tail cable in the connection as they are inexpensive and widely used.

20. **(Claim 13)** Hutzet et al. in view of Chan and in further view of Turnbull et al. discloses wherein the wireless communication module serves as an emergency help beacon, receiving internet data communication signals and wireless broadband

communication terminal to a PC, notebook PC, or PDA ([0114], [0123], [0110] and [0094]).

21. **(Claim 19)** Hutzet et al. in view of Chan and in further view of Turnbull et al. discloses wherein the USB/Ethernet outlets and the connections, between the device and a mass storage Hard Disk ([0115]), records long periods of driving via the USB or an Ethernet interface ([0115] and [0218]).

22. **(Claim 20)** Hutzet et al. in view of Chan and in further view of Turnbull et al. discloses wherein the rearview/side optical lenses that are embedded into the rearview/side mirror in a camouflaged method where a LED flash turns on when the camera captures an image in a night or dark moment ([0115]).

23. **(Claim 21)** Hutzet et al. in view of Chan and in further view of the Applicant's disclosed Background of the Invention, disclose wherein a multiplexer circuit that selects among a plurality of CCD/CMOS lenses for digital camera compression module to reduce the redundancy of MPEG/JPEG compression circuit (page 6, line 13-page 7, line 2).

24. **(Claim 22)** Hutzet et al. in view of Chan and in further view of the Applicant's disclosed Background of the Invention, disclose wherein the optical lenses are equalized to compensate the driver's head and rearview which resides behind the rearview mirror where portions of the reflecting material is processed in a way such that the light reflects less for visual recording (figure 3 and page 6, line 13-page 7, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the invention of Hutzet et al. in view of Chan with the discloses information of the Applicant's background because the use of the plural optical lenses is well known.

***Claim Rejections - 35 USC § 103***

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutzet et al. in view of Chan as applied to claims 1 and 2 above, and further in view of McCarthy et al., 6,678,614.

26. **(Claims 11, 12 and 14)** Hutzet et al. in view of Chan disclose the device described previously in claims 1 and 2, but do not disclose the use of a Smart Card reader. However, McCarthy et al. teaches the use of a contact or a contactless Smart Card reader device embedded into a rearview/side mirror that may be used for security key or transfer of information (Column 3, line 66-Column 4, line 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Hutzet et al. in view of Chan with the teachings of McCarthy et al. because, as the Applicant discloses, Smart Cards technology is increasingly known for its secure and is becoming widely used.

***Claim Rejections - 35 USC § 103***

Art Unit: 3661

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutzel et al. in view of Chan and the Background of the Invention, as applied to claim 1 above, and further in view of Scharon, US Patent No. 5,262,813.

28. **(Claim 24)** Hutzel et al. in view of Chan and the Background of the Invention discloses the device as described in Claim 1, wherein the device contains an impact/shock sensor taught by Chan. Chan does not teach wherein the impact/shock sensor comprises a double spring attached metal ball. However, Scharon teaches in the Background, that it is well known in the art that an typical impact sensor utilizes a movable mass, often in the shape of a spherical or metal ball, constrained to move through a closed chamber against restraining means, typically compressed springs, in order to detect sharp changes in acceleration, vibration, flip and in general a collision (Column 1, lines 18-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention as disclosed by Hutzel et al. in view of Chan and the disclosed Background, with the teachings of Scharon because the impact sensor taught by Scharon is inexpensive, simple and reliable.

29. **(Claim 25)** Hutzel et al. further discloses a microcontroller to identify significant instances to the central control module to coordinate the video/voice/motion recording and alarm/emergency activation ([0115] and [0120]), wherein the microcontroller also

Art Unit: 3661

takes the vehicle's speedometer input to consolidate with the motion gauge/sensor to record more complete vehicle motion data in the Flash memory ([0115]).

### ***Conclusion***

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine M. Behncke whose telephone number is (571) 272-8103. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05-20-2005

Application/Control Number: 10/603,460  
Art Unit: 3661

Page 14

A handwritten signature in black ink, appearing to read "Thomas G. Black", with a long horizontal flourish extending to the right.

THOMAS G. BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 3600